

Applying Science to Community Interests: Promoting Change Through User-friendly Environmental Indicators

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Abstract

This session will describe two environmental indicator projects undertaken by members of the Capital Regional District (CRD) Roundtable on the Environment: (1) a brochure and map that identifies the percentage of impervious surface cover in six Greater Victoria watersheds and discusses implications for ecosystem health and stormwater management, and (2) a fact-sheet and map that identifies the percentage of Sensitive Ecosystems Inventory polygons that are found inside and outside parks in the CRD. The goals of the projects were to use science-based environment and growth indicators to promote awareness of growth issues, affect change in individual and collective behaviour, and promote informed local government decision-making. A further assessment and development of indicators for the Capital Regional District is planned.

By promoting science through user-friendly indicators, the Roundtable is able to present information on complex and politically sensitive urban development issues in a neutral manner. Indicator results will enable municipalities and the community groups to prioritize conservation and restoration efforts. The broader implications of these projects include greater awareness of urban ecosystems, support for informed decision-making at the local level, and support for indicators as a barometer of the implications of urban development.

The Capitol Regional District (CRD) Roundtable on the Environment was formed in 1991 with a mandate to support the Capital Regional District in its efforts toward sustainability. The Roundtable comprises representatives of several stakeholder groups including seniors, youth, academics, professionals, business people, government, and CRD Directors. In an effort to fulfill its mandate, the Roundtable coordinated the production of a series of reports that established 41 indicators that broadly report on urban growth patterns, land & water quality, air quality, and toxic contaminants.

As the art and science of sustainability indicators matured, it was recognized that 41 indicators was too big a commitment in time and money. Additionally, many indicators were too obscure or irrelevant as indicators. There has been further consideration as to the ultimate purpose of sustainability indicators as a communication and educational tool beyond their value as a measure of regional sustainability.

With a move toward fewer, more relevant indicators, there is a series of criteria that are being applied in order to establish future indicators, which are:

Characteristic	Description
1. Relevant	▪ Indicator must provide information on 'things that matter,' such as an important goal, or a highly valued element.
2. Measurable	▪ Must be able to assign a measurement value to an indicator, preferably in a quantitative form.
3. Data Available	▪ Data must be readily available or attainable through cost-effective measuring and data interpretation activities.
4. Reliable	▪ Must be able to trust the information that the indicator is providing. Credible, standardized data collection and analysis techniques are required.
5. Repeatable	▪ Must be able to replicate the measurements as part of a systematic monitoring program to identify trends over time.
6. Understandable	▪ Audiences should be able to readily appreciate the meaning of the measurement results, even if the methodology behind the indicator is more complicated.
7. Responsive	▪ Indicators should be sensitive in the short-term to stresses or disturbances, thus providing for early detection of changes or problems, to allow enough time to correct problems.

Two of the first indicators that met the above criteria were the impervious surface and sensitive ecosystem indicators. This session described two environmental indicator projects undertaken by members of the Capital Regional District (CRD) Roundtable on the Environment: (1) a brochure that identifies the percentage of impervious surface cover in six Greater Victoria watersheds and discusses implications for ecosystem health and stormwater management, and (2) a brochure that identifies the percentage of Sensitive Ecosystems Inventory polygons that are found inside and outside parks in the CRD.

The goals of the projects were to use science-based environment and growth indicators to promote awareness of growth issues, affect change in individual and collective behaviour, and promote informed local government decision-making. A further assessment and development of indicators for the Capital Regional District is underway.

For the two indicators discussed, we outlined what the indicator addressed, why that indicator was chosen in terms of the criteria above, the goals of developing and promoting these indicators, the communication format and purpose, as well as both the challenges and opportunities each indicator presented.

By promoting science through user-friendly indicators, the Roundtable is able to present information on complex and politically sensitive urban development issues in a neutral manner. Indicator results will enable municipalities and the community groups to prioritize conservation and restoration efforts. The broader implications of these projects include greater awareness of urban ecosystems, support for informed decision-making at the local level, and support for indicators as a barometer of the implications of urban development.